

State of Wisconsin Renewable Energy Use Targets

The intent of this proposal is to establish targets for the State of Wisconsin's use of renewable energy.

- (a) Renewable resources to be defined by s. 196.378
- (b) State of Wisconsin facilities defined as office buildings, educational institutions and correctional facilities owned by the State of Wisconsin. Leased facilities will not be subject to this target.
- (c) Establish a baseline for renewable energy use in the state currently, including hydro. This baseline should be a percentage of the state's total energy consumption, not just for State of Wisconsin facilities. This should be approximately 5%, although individual utility's percentages will vary widely.
- (d) Using this baseline, State of Wisconsin facilities should either generate or procure 10% of their electricity from renewable resources by 2005 and 20% by 2010.
- (e) The State of Wisconsin can either procure this renewable energy from the local utility that provides electricity to State facilities or generate it on site. In purchasing from the local utility, the State will be credited with the baseline percentage described above in (b). To purchase additional renewable energy to meet the targets above, the State will acquire the renewable energy through a renewable option offered by that local utility (e.g. a green pricing program).
- (f) State purchases may not exceed the maximum amount of renewable energy offered by the local utility to state facilities in a given service territory (i.e. not retail wheeling). If the State has purchased the maximum amount of renewable energy offered by the utility to state facilities in a service territory and has not met the above targets, the State will be deemed to have fulfilled its duty to purchase renewable energy in this service territory. The State should then purchase additional renewable energy in other service territories to the extent available to meet the total statewide targets described above, not to exceed the maximum amount of renewable energy offered by the local utility to state facilities in each of these other service territories.
- (g) Direct the DOA to report on State compliance to the governor and legislature annually.

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Fiscal Analysis: Prepared by DOA's Division of Energy. Feb. 13, 2004.

	Cost	As % of FY 2003 Electric Bill for State-Owned Facilities ¹
10% by 2005	\$806,800	1.5%
20% by 2007	\$762,000	1.4%

Notes:

- FY03 state spending on electricity was \$55,263,312, not including many small or seasonally occupied buildings which account for 25% of the total state owned and operated square feet. (See below regarding consumption at those facilities.)
- Includes buildings owned and operated by the state, including any leased to non-state agencies, but not facilities the state leases from others, whether or not the state pays the utility bill.
- See assumptions regarding current and future percentage of renewables under RPS, marginal cost of renewable electricity, and growth of energy use.

Key Assumptions

While the average marginal cost of renewable electricity is currently around 3¢ per kWh, 1.8¢ per kWh is assumed as the marginal cost of renewable electricity for all state facilities. Improvements in renewable technology as well as economies of scale argue for lower marginal costs as a long list of renewable projects are installed. See "Green Pricing Discussion" below. Also, the state is free to implement on-site generation to meet the commitment.

It is assumed that the portion of renewable electricity without RPS additions remains steady at the pre-RPS (year 2000) level of 4.45%. The analysis assumes state buildings in aggregate receive the same percentage of renewable electricity as currently consumed statewide. Green-priced electricity is assumed to be negligible compared to RPS additions, and is included in the statewide total consumption of renewable electricity.

The analysis now accounts for rising electricity use at an annual growth of 2.4%, which agrees with the state's summary report for the period FY95-FY03.

About 25% of state-owned gross square feet (GSF) is not included in the state's summary reporting of FY03 energy usage, due to small size, seasonal use, or other factors. This analysis assumes these disparate facilities account for an additional 10% electricity usage.

The analysis includes usage at two-year colleges.

¹ Amounted to \$55,263,312. Source: Energy Use In State-Owned Facilities, FY03, Division of Facilities Development (now Division of State Facilities).

Green Pricing Discussion

Cost of green pricing premiums currently range from 2.1¢ to 3.3¢. A long queue of projects by We Energies, MGE/WPPI, and an independent power producer are in various stages of development. Some will go to the RPS, some will be available for green pricing. Summary list of MWh, for a total of approximately 1,000,000 MWh:

MWh (kWh x 1000)	Utility	Renewable Energy Type	Status
400,000	We Energies	wind	PPA and local permit
120,000	We Energies	wind	PPA, no permit yet
150,000	We Energies	biogas	letter of intent? Negotiation?
40-80,000	MGE/WPPI	wind	RFP in short list negotiation
250,000	to be determined (TBD)	wind	Permit, no PPA yet
250,000	Alliant procurement	TBD	utility internal planning

Of the approximately one million MWh potentially available, the state's requirements would be 44,800 MWh in 2005 and 42,300 in 2010.

Dairyland estimates that new projects, not included in the above listing, will drop their green pricing premium to 1.5¢, using wind and biogas.

Sources

1. Dairyland, MGE, WPS, We Energies personal communication via RENEW (queued projects and green pricing premiums)
2. Source for FY03 usage: Energy Use in State-Owned Facilities, FY03, Division of State Facilities, <http://www.doa.state.wi.us/dsf/index.asp>
3. 2003 Wisconsin Energy Statistics (having 2002 and previous data).